

What is claimed is:

1. A disc drive storage system comprising:
  - a housing having a central axis;
  - a stationary member that is fixed with respect to the housing and coaxial with the central axis;
  - a stator fixed with respect to the housing;
  - a rotatable member that is rotatable about the central axis with respect to the stationary member;
  - a rotor supported by the rotatable member and magnetically coupled to the stator;
  - at least one data storage disc attached to and coaxial with the rotatable member;
  - an actuator supporting a head proximate to the data storage disc for communicating with the disc; and
  - a hydrodynamic bearing interconnecting the stationary member and the rotatable member, the bearing having at least one working surface comprising a wear resistant, low frictional coating.
2. The disc drive storage system of claim 1 wherein the wear resistant low frictional coating comprises amorphous carbon, diamond-like carbon, hydrogenated amorphous carbon, nitrogenated amorphous carbon, hydrogenated diamond-like carbon, nitrogenated diamond-like carbon and combinations thereof.
3. The disc drive storage system of claim 1 wherein the wear resistant low frictional coating comprises two or more layers.
4. The disc drive storage system of claim 1 wherein the wear resistant low frictional coating has a thickness in the range of about 100 nanometer to about 5 microns.

5. The disc drive storage system of claim 1 wherein the wear resistant low frictional coating is deposited by at least one of physical vapor deposition (PVD), chemical vapor deposition (CVD) and plasma enhance chemical vapor deposition (PECVD).
6. The disc drive storage system of claim 1 wherein the wear resistant coating is formed on an adhesive layer.
7. The disc drive storage system of claim 6 wherein the adhesive layer comprises chromium, silicon, titanium, zirconium, silicon carbide and combinations thereof.
8. The disc drive storage system of claim 6 wherein the adhesive layer has a thickness in the range of about 1 nanometer to about 1 micron.
9. The disc drive storage system of claim 6 wherein the adhesive layer is deposited by at least one of physical vapor deposition (PVD), chemical vapor deposition (CVD) and plasma enhance chemical vapor deposition (PECVD).
10. A motor comprising:
  - a housing having a central axis;
  - a stationary member that is fixed with respect to the housing and coaxial with the central axis;
  - a stator fixed with respect to the housing;
  - a rotatable member that is rotatable about the central axis with respect to the stationary member;
  - a rotor supported by the rotatable member and magnetically coupled to the stator; and
  - a hydrodynamic bearing interconnecting the stationary member and the rotatable member, the bearing having at least one working surface comprising a wear resistant, low frictional coating.

11. The motor of claim 10 wherein the wear resistant, low frictional coating comprises amorphous carbon, diamond-carbon, hydrogenated amorphous carbon, nitrogenated amorphous carbon, hydrogenated diamond-like carbon, nitrogenated diamond-like carbon and combinations thereof.

12. The motor of claim 10 wherein the wear resistant low frictional coating has a thickness in the range of about 100 nanometer to about 5 microns.

13. The motor of claim 10 wherein the wear resistant low frictional coating comprises two or more layers.

14. The motor of claim 10 wherein the wear resistant low frictional coating is deposited by at least one of physical vapor deposition (PVD), chemical vapor deposition (CVD) and plasma enhance chemical vapor deposition (PECVD).

15. The motor claim 10 wherein the wear resistant, low frictional coating is formed on an adhesion layer.

16. The motor of claim 15 wherein the adhesion layer comprises chromium, silicon, titanium, zirconium, silicon carbide and combinations thereof.

17. The motor of claim 15 wherein the adhesion layer has a thickness in the range of about 1 nanometer to about 1 micron.

18. The motor of claim 15 wherein the adhesion layer is deposited by at least one of physical vapor deposition (PVD), chemical vapor deposition (CVD) and plasma enhance chemical vapor deposition (PECVD).

19. A motor, comprising:  
a hydrodynamic bearing interconnecting a stationary member and a rotatable member, wherein the hydrodynamic bearing has at least one

working surface; and

the at least one working surface has a wear reducing means thereon.

20. The motor of claim 19 the wear reducing means is formed on an adhesion means.